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The Leech Collection of the Mátra Museum (Hirudinea)

by
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Abstract: The paper reviews the leech collection of the Mátra Museum at Gyöngyös. Collecting was performed between 21.09.1993-04.06.1999. at 150 sampling sites. The reported 27 leech species constitute 90% of the Hungarian fauna.
Keywords: Hungary, Hirudinea, faunistics, distribution, communities, habitat

Introduction

The geographic distribution of the Hungarian leech species is largely unknown. The information gap in this respect inspired the authors to review, survey and publish all of the relevant data on the basis of the collection of the Mátra Museum. This collection is only paralleled by the leech collection of the Hungarian Natural History Museum at Budapest. By reviewing the Hungarian literature only limited number of faunistic papers appears. Earlier publications are usually limited to few water bodies. Evaluation of some of the Hungarian regions has already been started, but no overview has ever been published yet.

Authors carried out collecting between 21.09.1993–04.06.1999 at 150 sampling sites. Sampling campaigns covered all of the relevant sub-regions of the country, including water bodies on plains, hilly areas and mountains (bog, wetland, marshland, lake, creek, channel, river).

Material and methods

The collecting is based on the samplings of the authors, therefore the sampling method is given here. Samples of animals were collected by pond-net from the disturbed substrate that was bottom sediment as well as the higher plants. In addition we also thoroughly investigated the submerged tree trunks, larger boulders, artificial shore enforcements, and all of the larger non-natural articles, such as tire, plastic foils, etc. Collected animals were first anesthetized in 5-10% ethanol solution, which was followed by 50% of ethanol. At the end of the conservation process the slime was removed from the skin of the animals and they were finally fixed with fully elongated body in 70% ethanol solution. Species determination was based on the review of Nesemann (1997). The collection is deposited in the Mátra Museum at Gyöngyös.

Results

In the following section of the paper the sequence of the data gives the following details. First the municipality is named, and it is followed by the identification of the stream (sampling site). After this the collecting point is identified and the specific water body. The location is followed by the date of sampling. Finally the number of individuals found is given and the name(s) of the collector(s).

Abbreviations: AA=Ambrus András, BK=Bánkuti Károly, JP=Juhász Péter, sKT= senior Kovács Tibor, KT=Kovács Tibor, VA=Varga András.

Family Glossiphoniidae

Glossiphonia complanata (Linnaeus, 1758)

Badacsonytördemic: Lábdi, Summer camp, Balaton 28.10.1995, 2, JP, KT — Barcs: Aranyosi-tó 24.07.1997, 1, AA, KT, VA — Bezenye: Mosoni-Duna 11.10.1994, 4, AA, BK, KT — Bódvalenke: Sas-patak confluence, Bódva 19.07.1996, 1, BK, KT, VA — Borsodszirák: road to Sajószentpéteri, bridge, Bódva 09.04.1998, 2, VA — Büttös: Rakaca 25.08.1995, 1, BK, JP, KT — Cún: Ó-Dráva river bed, Stratiotes vegetations 07.11.1996, 1, AA — Csákánydoroszló: Vörös-patak 10.03.1999, 6, AA, JP, KT — Dunakiliti: Bozi-bridge, Zátonyi-Duna 11.09.1997, 1, AA, BK, KT — Dunasziget: bridge between Sérfenyő-Cikola, Gazfűi-holt-Duna 11.09.1996, 3, AA, BK, KT — Gönc: road to Göncruszka, Gönci-patak 09.06.1998, 1, BK, KT, VA — Győr: Győrsziget, Mosoni-Duna 23.08.1995, 1, AA, BK, KT; Regatta pavilon, Rába 12.09.1997, 3, BK, KT — Hegyfalu: Kőris-patak 15.10.1993, 1, AA, BK, KT — Jósvafő: near Jósvafő restaurant, Jósva 20.06.1996, 2, KT — Karancslapujtő: Dobroda at Etesi-patak confluence 30.11.1997, 1, KT — Kéked: Topolya-szeg, Hernád 23.08.1997, 2, KT — Keszthely: Fenékpuszta, Egyesített-övcsatorna at confluence to Zala 22.05.1996, 1, AA, BK, KT; Nyugati-berek, Zala 27.10.1995, 7, JP, KT — Kisterenye: road to Maconka, Zagyva 13.07.1996, 1, sKT, KT; railway bridge, Zagyva 22.04.1995, 5, sKT, KT; 26.07.1995, 2, KT — Magyarszombatfa: Szentgyörgyvölgyi-patak 11.03.1999, 6, AA, JP, KT — Mátraterenye: road No. 23., bridge, Zagyva 12.04.1997, 1, sKT, KT — Meszes: Rakaca 24.08.1995, 6, BK, JP, KT — Mosonmagyaróvár: Petőfi-bridge, Mosoni-Duna 22.09.1993, 1, AA, BK, KT; Road No. 86 bridge, Lajta 25.06.1998, 1, AA, BK, KT — Nagyar: Öreg-Túr 27.09.1995, 2, BK, JP, KT — Nagybátony: Maconkai-víztároló 26.07.1995, 1, KT — Nagyrákos: Zala 10.03.1999, 1, AA, JP, KT — Nemesnép: road to Csesztreg, Szentgyörgyvölgyi-patak 11.03.1999, 1, AA, JP, KT — Parád: Pisztrángos-tó, NW 20 m, spring-creek 31.07.1997, 1, KT, VA — Püski: Novákicsatorna 22.09.1993, 1, AA, BK, KT — Rajka: Duna 11.10.1994, 3, AA, BK, KT — Recsk: Búzás-völgyi-tó, South 200 m, Búzás-patak 13.01.1998, 1, BK, KT — Sárvár: No. 84 road, Rába 12.05.1998, 1, AA, BK, KT — Szécsisziget: Kerka 11.03.1999, 1, AA, JP, KT — Szegerdő: Marót-völgyi-csatorna 04.07.1996, 1, AA, BK, KT — Szemenye-csörnye: Csernec, Kerka 10.05.1994, 2, AA, KT, VA — Tiszabecs: Batár 30.07.1995, 1, KT — Tornaszentjakab: Sas-patak 01.05.1996, 1, AA, BK, JP, KT — Vatta: Geszti-patak confluence, South 100 m, Csincse-patak 18.07.1996, 2, BK, KT, VA — Zalalövő: road to Keménfa , Zala 10.03.1999, 4, AA, JP, KT — Zalavár: Kis-Balaton II. phase reservoir, Ingói-csatorna, at Ingói pumping station 26.09.1996, 1, VA; at bird-watching tower, Zala 09.05.1995, 1, AA, BK, KT; weir, Zala 09.05.1995, 1, AA, BK, KT; Zalavári-víz 21.09.1993, 1, AA, BK, KT — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 2, JP, KT.

Glossiphonia nebulosa Kalbe, 1964

Badacsonytomaj: Badacsonyörs, Balaton 28.10.1995, 1, JP, KT — Bódvalenke: Sas-patak confluence point, Bódva 19.07.1996, 1, BK, KT, VA — Csákánydoroszló: Vörös-patak 10.03.1999, 2, AA, JP, KT — Kerkaszentkirály: Kerka 06.09.1995, 1, BK, KT, VA — Keszthely: Nyugati-berek, Zala 27.10.1995, 1, JP, KT — Nagyar: Öreg-Túr 27.09.1995, 2, BK, JP, KT — Taktaharkány: Pusztatemplom, Takta 10.06.1998, 1, BK, KT, VA — Vatta: Geszti-patak confluence, South 100 m, Csincse-patak 18.07.1996, 3, BK, KT, VA — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 7, JP, KT.

Glossiphonia concolor (Apáthy, 1888)

Badacsonytomaj: Badacsonyörs, Balaton 28.10.1995, 1, JP, KT — Balatonfüred: Shipyard, Balaton 28.10.1995, 4, JP, KT —

Balatonmagyaród: Kis-Balaton II. phase reservoir, wetland N to bridge next to Magyaros-island 26.09.1996, 2, VA — Balatonszentgyörgy: SW, Batthyány-övárok 27.09.1996, 1, VA — Keszthely: Nyugati-berek, Zala 27.10.1995, 2, JP, KT — Sávoly: railway station, Cölömpös-árok 27.09.1996, 1, VA — Szécsisziget: Kerka 11.03.1999, 1, AA, JP, KT — Szőkedencs: Kápolnai pumping station, Zala-Somogy-határárok parallel channel to East 07.08.1996, 4, AA, BK, KT — Zalavár: Ingói pumping station North 1 km, flooded area opposite to Ingói-channel 16.10.1993, 3, AA, BK, KT; Zalavári-víz 21.09.1993, 1, AA, BK, KT — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 3, JP, KT.

Glossiphonia paludosa (Carena, 1824)

Győr: Regatta pavilon, Rába 25.06.1998, 1, AA, BK, KT — Mosonmagyaróvár: No. 86 road bridge, Lajta 11.09.1997, 2, AA, BK, KT.

Hemiclepsis marginata (O. F. Müller, 1774)

Dunasziget: bridge between Sérfenyő-Cikola, Gazfűi-holt-Duna 11.09.1996, 1, AA, BK, KT — Ipolytarnóc: Káposztás, weir, Ipoly 14.12.1997, 1, sKT, KT — Kisterenye: railway bridge, Zagyva 26.07.1995, 1, KT — Lipót: Holt-Duna 11.10.1994, 1, AA, BK, KT — Szécsisziget: Kerka 11.03.1999, 1, AA, JP, KT — Szemenyecsörnye: Csernec, Kerka 10.05.1994, 1, AA, KT, VA — Tiszabecs: Batár confluence, Tisza 04.06.1998, 1, KT, TI — Tiszacsege: Kácsa-sziget, pumping station, Holt-Tisza 13.07.1995, 1, BK, JP, KT — Zalavár: bird-watching tower, Zala 09.05.1995, 1, AA, BK, KT; Zalavár: Zalavári-víz 07.08.1996, 1, AA, BK, KT.

Theromyzon tessulatum (O. F. Müller, 1774)

Balmazújváros: Nagy-szik 12.12.1994, 1, JP, KT — Bezenye: Mosoni-Duna 11.10.1994, 1, AA, BK, KT — Dunakiliti: Ördög-sziget, gravel pit lake 11.10.1994, 1, AA, BK, KT — Dunasziget: bridge between Sérfenyő-Cikola, Gazfűi-holt-Duna 08.08.1996, 1, AA, BK, KT — Győr: Bácsa, shallow lakes 08.05.1997, 1, AA, BK, KT — Ipolytarnóc: Káposztás, weir, Ipoly 14.12.1997, 1, sKT, KT — Kunmadaras: Nagy-Darvas-fenék 13.07.1995, 1, BK, JP, KT — Lipót: road to Hédervár bridge, Zsejkei-csatorna 12.10.1994, 1, AA, BK, KT — Mosonmagyaróvár: Parti-erdő West, marshland 08.05.1997, 1, AA, BK, KT — Nagybátony: Maconkai-víztároló 08.09.1995, 1, sKT, KT — Rajka: Ördög-sziget, shallow lakes 08.08.1996, 1, AA, BK, KT — Sármellék: Keleti-berek, flooded area opposite to Kenderáztató-channel 16.10.1993, 2, AA, BK, KT — Zalavár: Ingói pumping station N 1 km, flooded area opposite to Ingói-channel 16.10.1993, 1, AA, BK, KT; Zalavári-víz 21.09.1993, 1, AA, BK, KT.

Helobdella stagnalis (Linnaeus, 1758)

Balatonfűzfő: Fűzfői-öböl, Tobruk, Balaton 28.10.1995, 5, JP, KT — Cún: Ó-Dráva river bed, Stratiotes vegetations 07.11.1996, 1, AA — Erdőbénye: Lukács-forrás 19.07.1996, 1, BK, KT, VA — Gönc: Kismező, Gönci-patak 09.08.1995, 7, JP, KT — Gyöngyöspata: Csurgóitanyák, North 200 m, small spring-creek to Ám-patak 19.04.1995, 1, BK, KT — Ipolytarnóc: Káposztás, weir, Ipoly 14.12.1997, 1, sKT, KT — Nagyar: Öreg-Túr 27.09.1995, 1, BK, JP, KT — Nagybátony: Maconkai-víztároló 08.09.1995, 5, sKT, KT — Püspökladány: Nagy-Makkod, Makkodi-csatorna 11.07.1995, 1, BK, JP, KT — Szakonyfalu: Rába 19.06.1997, 1, AA, BK, KT — Szalonna: Rakaca-víztároló 24.08.1995, 2, BK, JP, KT — Szuha: Hagymás-patak 04.09.1996, 2, BK, KT — Tiszacsege: Kácsa-sziget, pumping station, Holt-Tisza 13.07.1995, 6, BK, JP, KT — Vonyarcvashegy: Szent Mihály hill, Balaton 27.10.1995, 2, JP, KT — Zalavár: Kis-Balaton II. phase reservoir, Ingói-csatorna, at Ingói-pumping station 26.09.1996, 1, VA — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 1, JP, KT.

Placobdella costata (Fr. Müller, 1846)

Barcs: Aranyosi-tó 24.07.1997, 1, AA, KT, VA — Biharugra: Ugrai-rét, Stratiotes vegetations 23.07.1996, 2, AA, KT — Cún: Ó-Dráva-meder, Stratiotes vegetations 07.11.1996, 1, AA — Lipót: road to Hédervár, bridge, Zsejkei-csatorna 12.10.1994, 1, AA, BK, KT.

Batracobdelloides moogi Nesemann & Csányi, 1995

Balatonfüred: Shipyard, Balaton 28.10.1995, 2, JP, KT — Keszthely: Fenékpuszta, Diás-sziget 50 m NE of inlet, flooded area 07.05.1997, 3, AA, BK, KT; Nyugati-berek, Zala 27.10.1995, 2, JP, KT — Vonyarcvashegy: Szent Mihály hill, Balaton 27.10.1995, 2, JP, KT — Zalavár: 1 km N to Ingói pumping station opposite to Ingói-channel 16.10.1993, 12, AA, BK, KT; bird-watching tower, Zala 09.05.1995, 1, AA, BK, KT; Zalavári-víz 21.09.1993, 1, AA, BK, KT; 09.05.1995, 2, AA, BK, KT.

Alboglossiphonia heteroclita (Linnaeus, 1758)

Szarvas, Aranyosi-Holt-Körös 01.06.1998, 1 (f. *striata* Apáthy, 1888), JP — Tiszacsege: Kácsa-sziget, pumping station, Holt-Tisza 13.07.1995, 1, BK, JP, KT.

Alboglossiphonia hyalina (O. F. Müller, 1774)

Öcsöd, Gyügér-zug-marshland 02.06.1998, 1, JP.

Family Piscicolidae

Piscicola geometra (Linnaeus, 1758)

Bezenye: Mosoni-Duna 11.10.1994, 2, AA, BK, KT — Drávasztára: Dráva 24.07.1997, 1, AA, KT, VA — Keszthely: Fenékpuszta, Research Station, Egyesített-övcsatorna 08.05.1995, 1, AA, BK, KT; 23.07.1997, 2, KT, VA; Nyugati-berek, Zala 27.10.1995, 2, JP, KT — Kisterenye: railway bridge, Zagyva 22.04.1995, 1, sKT, KT — Lipót: road to Hédervár, Zsejkei-csatorna 23.05.1996, 1, BK, KT — Meszes: Rakaca 24.08.1995, 3, BK, JP, KT — Mosonmagyaróvár: road to Feketeerdő, Mosoni-Duna 11.09.1997, 1, AA, BK, KT — Nádudvar: bridge at Mihályhalma, Hortobágy 11.07.1995, 1, BK, JP, KT — Nagybátony: Maconkai-víztároló 08.09.1995, 1, sKT, KT — Paloznak: Palóznaki-öböl, Balaton 28.10.1995, 2, JP, KT — Rédics: road to Gáborjánháza, Kebele 11.03.1999, 2, AA, JP, KT — Szegerdő: Marót-völgyi-csatorna 06.11.1996, 1, AA — Vonyarcvashegy: Szent Mihály Hill, Balaton 27.10.1995, 1, JP, KT — Zalakomár: Kápolnapuszta, Zimányi-árok 07.08.1996, 2, AA, BK, KT — Zalavár: bird-watching tower, Zala 09.05.1995, 1, AA, BK, KT.

Piscicola haranti Jarry, 1960

Rédics: road to Gáborjánháza, Kebele 11.03.1999, 1, AA, JP, KT — Tiszabecs: Batár 30.07.1995, 1, KT.

Caspiobdella fadejewi (Epshtein, 1961)

Berzék: Szemere-legelő, Hernád 03.06.1999, 1, KT, VA — Bőcs: road to Sajólád, Bársonyos 22.10.1998, 3, KT, VA — Gesztely: road to Onga, Hernád 22.10.1998, 1, KT, VA — Kéked: Topolya-szeg, Hernád 23.08.1997, 5, KT — Kerkakutas: road to Alsószenterzsébet, Kerka 11.03.1999, 1, AA, JP, KT — Kerkaszentkirály: Kerka 06.09.1995, 1, BK, KT, VA — Kesznyéten: road to Tiszaújváros, Sajó 10.06.1998, 1, BK, KT, VA — Lenti: road No. 75, Kerka 11.03.1999, 1, AA, JP, KT — Magyarlak: bank of Rába 24.06.1998, 1, AA, BK, KT — Mérges: dirtroad to Rábaszentmihály, Rába 05.05.1999, 1, KT — Mosonmagyaróvár: road No. 86, Lajta 22.08.1995, 1, AA, BK, KT; 23.05.1996, 1, BK, KT; 08.05.1997, 1, AA, BK, KT; 11.09.1997, 2, AA, BK, KT; 25.06.1998, 2, AA, BK, KT — Sajószentpéter: Alsó-berek, Sajó 27.05.1998, 1, BK, KT, VA — Sárvár: road No. 84, Rába 12.05.1998, 6, AA, BK, KT; 23.06.1998, 3, AA, BK, KT — Szakonyfalu: Rába 19.06.1997, 1, AA, BK, KT.

Cystobranchus respirans (Troschel, 1850)

Hidvégardó: road to Bódvalenke, Sas-patak 04.06.1999, 2, sKT, KT — Moson-magyaróvár: road No. 86, Lajta 08.05.1997, 1, AA, BK, KT — Sárvár: road No. 84, Rába 12.05.1998, 3, AA, BK, KT.

Family Hemopidae

Haemopis sanguisuga (Linnaeus, 1758)

Balatonmagyaród: Kis-Balaton II. phase reservoir, bridge at Hangyálos-szigetek 26.09.1996, 1, VA — Csákánydoroszló: Vörös-patak 10.03.1999, 1, AA, JP, KT — Gagybátor: Bátori-patak 13.06.1996, 1, sKT, KT — Kisterenye: Keszi side, Kazár-stream 21.04.1996, 1, sKT, KT; railway bridge, Vizslás-patak 01.04.1998, 2, sKT, KT; railway bridge, Zagyva 12.04.1997, 1, sKT, KT — Nyíregyháza: Mandai-lapos, wetlands 16.04.1995, 1, KT — Sármellék: Keleti-berek, flooded area opposite to Kenderáztató-channel 16.10.1993, 1, AA, BK, KT; Keleti-berek, flooded area opposite to Alsó-Nyugati-channel 16.10.1993, 1, AA, BK, KT — Szarvasgede: Szuha-patak 17.10.1996, 1, AA, BK — Taktaharkány: Bogárzó-halom, Harangod 10.06.1998, 1, BK, KT, VA — Tornaszentjakab: Sas-patak 01.05.1996, 2, AA, BK, JP, KT; 13.06.1996, 1, sKT, KT — Vámosgyörk: Rédeitanya, Gyöngyös 17.11.1996, 1, KT — Vörs: point opposite to the inlet of Diás-island, Zala 22.05.1996, 1, AA, BK, KT — Zalaszentlászló: Szentlászlói-patak 19.04.1998, 1, AA — Zalavár: bird-watching tower , Zala 09.05.1995, 1, AA, BK, KT; Zalavári-víz 21.09.1993, 1, AA, BK, KT.

Family Hirudinidae

Hirudo medicinalis Linnaeus, 1758

Keszthely: Fenékpuszta, flooded area opposite to Öreg-Berki-Főcsatorna 09.05.1995, 1, AA, BK, KT; Fenékpuszta, pit lakes 25.07.1997, 1, AA, KT — Vörs: North, perpendicular channel to Pörös-árok 22.05.1996, 1, AA, BK, KT.

Hirudo verbana Carena, 1820

Barcs: Aranyosi-tó 24.07.1997, 1, AA, KT, VA — Fülöpszállás: Fehér-szék 21.05.1998, 1, AA, BK, KT — Nyíregyháza: Lóczibokor, sodic lake 16.04.1995, 2, KT.

Family Erpobdellidae

Erpobdella octoculata (Linnaeus, 1758)

Bezenye: Mosoni-Duna 11.10.1994, 1, AA, BK, KT — Csabrendek: road No. 84, Melegvíz 22.05.1996, 1, AA, BK, KT — Csákánydoroszló: Vörös-patak 10.03.1999, 1, AA, JP, KT — Dunaszeg: bank of Mosoni-Duna 17.08.1998, 1, AA, KT — Dunasziget: bridge between Sérfenyő-Cikola, Gazfűi-holt-Duna 11.09.1996, 2, AA, BK, KT — Felsőtárkány: Szikla-tó 08.03.1995, 4, BK, KT — Gagybátor: Bátori-patak 13.06.1996, 1, sKT, KT — Hegyfalu: Kőris-patak 15.10.1993, 1, AA, BK, KT — Hidasnémeti: Tükör, Hernád 09.06.1998, 2, BK, KT, VA — Himod: Kardos-ér 09.05.1996, 1, AA — Kéked: Topolya-szeg, Hernád 23.08.1997, 1, KT — Keszthely: Fenékpuszta, Egyesített-övcsatorna at Zala confluence 22.05.1996, 1, AA, BK, KT; Nyugati-berek, Zala 27.10.1995, 1, JP, KT — Kisterenye: railway road, Zagyva 26.07.1995, 1, KT — Kunmadaras: Nagy-Darvas-fenék 31.08.1995, 1, JP, KT — Lenti: road No. 75, Kerka 11.03.1999, 1, AA, JP, KT — Lovas: Szerdahelyi-dűlő, Balaton 28.10.1995, 3, JP, KT — Meszes: Rakaca 24.08.1995, 1, BK, JP, KT — Mosonmagyaróvár: road No. 86, Lajta 05.07.1996, 2, AA, BK, KT — Nagyar: Öreg-Túr 27.09.1995, 1, BK, JP, KT — Nagybátony: Maconkai-víztároló 26.07.1995, 1, KT; 08.09.1995, 2, sKT, KT — Nagymaros: Törökmező, fishing lake 12.05.1997, 1, Merkl Ottó — Nagyrákos: Zala 10.03.1999, 5, AA, JP, KT — Nemesnép: road to Csesztreg, Szentgyörgyvölgyi-patak 11.03.1999, 1, AA, JP, KT — Pákozd: Császár-víz 01.05.1995, 1, KT — Rajka: Duna 11.10.1994, 1, AA, BK, KT — Rédics: road to Gáborjánháza, Kebele 11.03.1999, 1,

AA, JP, KT — Sárvár: road No. 84, Rába 12.05.1998, 1, AA, BK, KT — Szarvasgede: Szuha-patak 17.10.1996, 1, AA, BK — Szécsisziget: Kerka 11.03.1999, 5, AA, JP, KT — Szigliget: Külsősoponya, Balaton 27.10.1995, 2, JP, KT — Taktaharkány: Pusztatemplom, Takta 10.06.1998, 1, BK, KT, VA — Tar: Zagyva 27.12.1994, 1, sKT, KT — Tornaszentjakab: Sas-patak 01.05.1996, 4, AA, BK, JP, KT — Vámosgyörk: Rédeitanya, Gyöngyös 17.11.1996, 1, KT — Vatta: at Geszti-patak confluence point, South 100 m, Csincse-patak 18.07.1996, 2, BK, KT, VA — Vonyarcvashegy: Szent Mihály Hill, Balaton 27.10.1995, 2, JP, KT — Zalalövő: road to Keménfa, Zala 10.03.1999, 4, AA, JP, KT — Zalavár: Kis-Balaton II. phase reservoir at Ingói-pumping station 26.09.1996, 1, VA; Kis-Balaton II. phase reservoir, Ingói-csatorna, at Ingói-pumping station 26.09.1996, 3, VA; Zalavári-víz 21.09.1993, 3, AA, BK, KT; 09.05.1995, 1, AA, BK, KT; 07.08.1996, 4, AA, BK, KT — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 1, JP, KT.

Erpobdella vilnensis (Liskiewicz, 1925)

Gagybátor: Bátori-patak 13.06.1996, 3, sKT, KT — Gyöngyöspata: Csurgóitanyák, North, 200 m, small spring-creek to Ám-patak 19.04.1995, 1, BK, KT — Jósvafő: Jósvafő near Jósvafő restaurant, Jósva 20.06.1996, 2, KT — Kéked: Topolya-szeg, Hernád 23.08.1997, 1, KT — Kisterenye: railway bridge, Kazár-patak 31.05.1997, 1, sKT, KT — Mátraverebély: Szentkút, Szentkúti-patak 08.04.1995, 1, sKT, KT — Nagyvisnyó: Lion-kert, Bán-patak 01.03.1995, 1, BK, KT — Parád: Pisztrángos-tó 12.04.1995, 4, BK, KT; Pisztrángos-tó, NW 20m, spring-creek 31.07.1997, 1, KT, VA; Pisztrángos-tó, N-W 500 m, creek 31.07.1997, 3, KT, VA — Parádfürdő: Vörösvár, Ilona-patak 21.02.1995, 1, KT — Parádsasvár: Fekete-tó, South 150 m, Áldozó-patak 02.04.1998, 4, sKT, KT — Perecse: Szirákó-völgy, Sas-patak 09.06.1998, 1, BK, KT, VA — Szuha: Gombás-tó 04.09.1996, 1, BK, KT — Szurdokpüspöki: pit lake on Pince-patak 19.04.1995, 1, BK, KT — Tornaszentjakab: Sas-patak 13.06.1996, 1, sKT, KT — Zalalövő: road to Keménfa, Zala 10.03.1999, 1, AA, JP, KT — Zalaszentlászló: Szentlászlói-patak 19.04.1998, 2, AA — Zalaudvarnok: Zalaudvarnoki- patak 19.04. 1998, 1, AA.

Erpobdella nigricollis (Brandes, 1900)

Badacsonytomaj: Badacsonyörs, Balaton 28.10.1995, 3, JP, KT — Bőcs: Hernádvíz Kft., upstream section, Hernád 03.06.1999, 1, KT, VA — Cún: Ó-Dráva-meder, Stratiotes vegetation 07.11.1996, 1, AA — Dunasziget: bridge between Sérfenyő-Cikola, Gazfűi-holt-Duna 11.09.1996, 1, AA, BK, KT — Hidasnémeti: Tükör, Hernád 09.06.1998, 1, BK, KT, VA — Ipolytarnóc: Káposztás, weir, Ipoly 14.12.1997, 1, sKT, KT — Kéked: Topolya-szeg, Hernád 23.08.1997, 1, KT — Keszthely: Nyugati-berek, Zala 27.10.1995, 3, JP, KT — Nagyar: Öreg-Túr 27.09.1995, 3, BK, JP, KT — Sárvár: road No. 84, Rába 07.05.1999, 1, AA, KT — Tiszabecs: Batár 30.07.1995, 1, KT — Vonyarcvashegy: Szent Mihály domb, Balaton 27.10.1995, 2, JP, KT — Zalavár: Zalavári-víz 21.09.1993, 2, AA, BK, KT; 07.08.1996, 1, AA, BK, KT — Zánka: Pioneer City, Bere-árok, Balaton 28.10.1995, 6, JP, KT.

Erpobdella testacea (Savigny, 1822)

Balatonudvari: Summer camp, Balaton 28.10.1995, 3, JP, KT — Dunasziget: Nagysziget, Gazfűi-holt-Duna 28.06.1995, 1, AA, JP, KT — Mosonmagyaróvár: Parti-erdő East, bog 11.09.1996, 1, AA, BK, KT — Szőce: Szőcei-patak 18.05.1997, 1, AA — Zalavár: 1 km N to Ingói pumping station opposite to Ingói-channel 16.10.1993, 2, AA, BK, KT; bird-watching tower, Zala 09.05.1995, 2, AA, BK, KT; Zalavári-víz 09.05.1995, 1, AA, BK, KT.

Dina lineata (O. F. Müller, 1774)

Bőcs: Hernádvíz Kft., upstream, Hernád 03.06.1999, 2, KT, VA — Gyöngyöspata:

reservoir on the Ám-patak 19.04.1995, 1, BK, KT — Hortobágy: Máta, Rács-fok 31.10.1996, 1, JP, KT — Nyíregyháza: Mandai-lapos, wetlands 16.04.1995, 1, KT — Tornaszentjakab: Sas-patak 13.06.1996, 2, sKT, KT — Vörs: South, trench in village next to road 27.09.1996, 1, VA.

Dina punctata Johansson, 1927

Bezenye: Mosoni-Duna 11.10.1994, 2, AA, BK, KT — Dunakiliti: river bed dam, Duna 22.08.1995, 4, AA, BK, KT — Kercaszomor: Kerca 06.05.1999, 1, AA, KT — Mosonmagyaróvár: road No. 86, Lajta 05.07.1996, 2, AA, BK, KT; 20.06.1997, 1, AA, BK, KT; 11.09.1997, 1, AA, BK, KT; 25.06.1998, 1, AA, BK, KT; road to Feketeerdő, Mosoni-Duna 11.09.1997, 1, AA, BK, KT; 14.05.1998, 1, AA, BK, KT — Rajka: Duna 11.10.1994, 5, AA, BK, KT — Sopron: Kocsedó-völgy, Kocsedó-patak 15.05.1996, 1, AA, KT.

Dina apathyi Gedroyc, 1916

Csabrendek: road No. 84, Meleg-víz 21.09.1993, 1, AA, BK, KT — Keszthely: Fenékpuszta, flooded area opposite to Öreg-Berki-Főcsatorna 09.05.1995, 1, AA, BK, KT — Szatmárcseke: Túrbukó, Tisza 27.09.1995, 1, BK, JP, KT — Tiszabecs: Batár confluence, Tisza 04.06.1998, 1, KT, TI — Vonyarcvashegy: Szent Mihály Hill, Balaton 27.10.1995, 1, JP, KT — Zalavár: weir, Zala 09.05.1995, 1, AA, BK, KT; Kis-Balaton II. phase reservoir, Ingói-csatorna, at Ingói-pumping station 26.09.1996, 1, VA.

Trocheta cylindrica Örley, 1886

Hidvégardó: bridge on road to Bódvalenke road, Sas-patak 04.06.1999, 1, sKT, KT — Sárvár: road No. 84, Rába 12.05.1998, 1, AA, BK, KT.

Trocheta riparia Nesemann, 1993

Bajánsenye: bridge on road to Kercaszomor Kerka 10.03.1999, 1, AA, JP, KT

Discussion

The published 27 species represent 90% of the Hungarian leech fauna. The following three species were not captured during our samplings: *Cystobranchus fasciatus, Trocheta bykowskii and Glossiphonia verrucata.*

There are many rare species in the collection (*Glossiphonia paludosa, Placobdella costata, Batracobdelloides moogi, Alboglossiphonia hyalina, Piscicola haranti, Caspiobdella fadejewi, Cystobranchus respirans, Dina apathyi, Trocheta riparia*) and the following remarks discuss their distribution and the literature related to them.

Placobdella costata — Literature data: Orgovány, Balatonfenyves (Soós 1963), Bátorliget (Nesemann 1991), Lipót (Nesemann 1997), Biharugra (Juhász *et al.* 1998). Authors revealed its existence at four sampling locations. Hungarian distribution is shown on Fig. 1. This is an ectoparasite species occurring most often on the Hungarian marshland turtle (*Emys orbicularis*). Apart from its typical host, it also occurs on higher plants. Wetlands of high natural value, bogs and slow-flowing water bodies contain isolated populations of this species. It prefers waters, where *Stratiotes aloides* occurs.

Alboglossiphonia hyalina — Only a limited number of Hungarian data exist on this species (Csányi 1996; Nesemann 1998, Juhász *et al.* 1998). Authors found specimens in the Gyügér-zug marsh at Öcsöd (Fig. 1). It is a rare, sporadically occurring species, good indicator of natural wetlands, marshes and dead-arms of rivers. It is a parasite of the *Lymnaea* species. Its occurrence is temporal, occasionally can disappear for a prolonged time period.

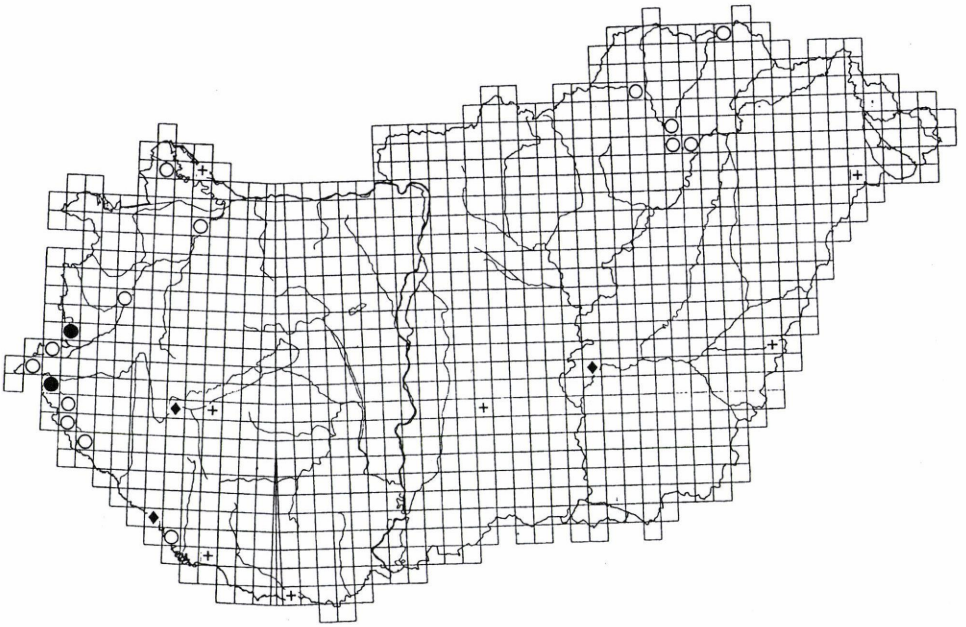

Fig. 1. Distribution of *Placobdella costata*: +, *Alboglossiphonia hyalina*: ◆, *Caspiobdella fadejewi*: ○ and *Trocheta riparia*: ● in Hungary.

Caspiobdella fadejewi — The existence of this species was revealed at 14 sampling locations (Fig. 1). It is a characteristic leech species of flowing waters that was only registered in few locations in Hungary during the past few years. Its occurrence is evident in clean, fast-flowing, oxygen-rich river sections, where the substrate consists of pebbles.

Cystobranchus respirans — Similarly to the previously described species the clean and fast flowing rivers are the typical habitats for this species. It is the parasite leech of cyprinid and salmonid fishes. The occurrence was registered at three sampling points, in two sites it was found to coexist with *Trocheta cylindrica*.

Hirudo verbana — New species in the Hungarian leech fauna, recorded at three sampling locations. Earlier the species *Hirudo verbana* Carena was known under the name of *Hirudo medicinalis* forma *officinalis*. Its main distribution area is the Western part of Carpathian Basin and some places in the Middle East (Turkey, Syria, Israel). It is anticipated that in Hungary *H. verbana* is the dominant species in the Hanság and in the Great Hungarian Plains. *H. medicinalis* is another species that is more common in the Lake Balaton watershed and along the Danube River. In general, *H. verbana* is not known from the floodplains of the large lowland rivers of the Western Carpathian Basin. Therefore the natural distribution border of the *H. verbana* and *H. medicinalis* is in the East of Austria and Northwest of Hungary (Balaton – Szigetköz) (Hasko Nesemann, pers. commun.).

Trocheta riparia — The species was first described by Nesemann from the Pinka River (Nesemann 1993). It is an endemic leech species that has been known only from locus typicus. Authors found one specimen in the Kerka River (that is the second occurrence data of the species) (Fig. 1). This sampling point is in the vicinity of the type locality. It occurs in the hypocrenal zone of the surface water and its biology is practically unkown.

Of the investigated rivers the Rába and Kerka have to be mentioned. In both rivers eight species were collected, from which three are rare in the case of the Rába: *Glossiphonia paludosa, Caspiobdella fadejewi, Cystobranchus respirans,* and two in case of the Kerka*: C. fadejewi, T. riparia.*

Three new species were described from the fauna of the Dráva River and its watershed area compared to Nesemann (1998)*: Placobdella costata, Piscicola geometra, Hirudo verbana.*

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